

**Puget Sound Action Team**  
**GMA Update Recommendations to Local Governments in Puget Sound**  
**April 2004**

**Areas of focus:** The Puget Sound Action Team's recommendations target opportunities to integrate stormwater management and the protection of water quality, shellfish growing areas and nearshore habitat into comprehensive plans and ordinances.

**Contents:** Recommendations for Comprehensive Plan policies, Critical Areas Ordinance, Stormwater Ordinance, Agricultural Lands Ordinances, Zoning Code Regulations, Health Code. Recommendations include references to supporting language in the Revised Code of Washington (RCW), Washington Administrative Code (WAC) and *Puget Sound Water Quality Management Plan* (PSMP).

<b>GMA Document</b>	<b>Issue of Concern</b>	<b>Recommendation</b>
<b>Comprehensive Plan</b>	UGA Boundaries	Avoid expansion of UGA boundaries into areas where urbanization may have a significant adverse impact on critical natural resources, shellfish growing areas, habitat areas, flood hazard and aquifer recharge areas. If avoidance is not possible, then require mitigation through special regulations, such as requirements for open space, lower densities, forest retention, minimizing impervious surface areas and use of other low impact development techniques. Plan for future development with urban levels of stormwater standards in UGAs outside of incorporated areas. When reducing the size of a UGA, do so first in areas where a UGA drains to a shellfish growing area or other critical habitat area. (PSMP SW-1.1)
<b>Comprehensive Plan</b>	Limited Areas of More Intense Rural Development, or LAMIRDs (Counties only)	LAMIRDs allow infill development at higher densities than other rural areas. Recommended policies address managing the urban-type drainage and water quality problems of these special rural areas. Policies should require a higher level of stormwater planning and management in these areas, and promote low impact development as infill occurs. Policies should encourage clustering provisions, limiting impervious surfaces, protecting existing forest cover, and encouraging practices such as bioretention, soil amendment, and pervious pavement to treat and where possible infiltrate stormwater on-site. (PSMP SW-1.2.i )

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<b>Comprehensive Plan</b>	Stormwater	<p>The comprehensive stormwater program of the <i>Puget Sound Water Quality Management Plan</i> (PSMP SW-1.1) <a href="http://www.psat.wa.gov/Publications/manplan00/mp_index.htm">http://www.psat.wa.gov/Publications/manplan00/mp_index.htm</a> is adopted by the state as the goal for all Puget Sound jurisdictions. The comprehensive program provides guidance for protection of public and private property and sensitive natural areas from the adverse effects of stormwater runoff from development. The Puget Sound Action Team recommends that the Comprehensive Plan include a policy to adopt the comprehensive stormwater program elements not yet incorporated into the jurisdiction's program, including adoption of the 2001 Ecology <i>Stormwater Management Manual for Puget Sound</i> or an equivalent manual.</p> <ul style="list-style-type: none"> <li>• Stormwater controls for new development and redevelopment.</li> <li>• Site plan review</li> <li>• Inspection of construction sites</li> <li>• Maintenance of permanent facilities</li> <li>• Source control</li> <li>• Illicit discharges and water quality response</li> <li>• Identification and ranking of problems</li> <li>• Public education and involvement</li> <li>• Low impact development practices</li> <li>• Watershed or basin planning</li> <li>• Local funding capacity</li> <li>• Monitoring program</li> <li>• Schedule for implementation</li> </ul>
<b>Comprehensive Plan</b>	Subarea Plans	<p>Subarea boundaries should be aligned with sub-basin boundaries, so that subarea plans are developed around the area as a functioning watershed. A good model is Kitsap County's Planning by Watershed process with more information at <a href="http://www.kitsapgov.com/nr/nr/planningbywatershed.htm">http://www.kitsapgov.com/nr/nr/planningbywatershed.htm</a> (PSMP SW 1.2.j)</p>

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<b>Comprehensive Plan</b>	Clearing and grading ordinance	Policy to adopt a clearing and grading ordinance, if jurisdiction does not have one. CTED is developing a model ordinance incorporating low impact development that will be available in summer 2004.
<b>Comprehensive Plan</b>	Resource Lands - Designating shellfish beds as agricultural lands of long-term commercial significance	The GMA under RCW 36.70A.030 (2) provides the latitude to designate aquaculture resource lands, including commercial shellfish tidelands and their upland facilities as lands of “long-term commercial significance for agricultural production.” As with critical areas, the comprehensive plan and development regulations should be structured to protect the values, functions and continued use of shellfish beds while prohibiting incompatible, adjacent land uses. Policies can allow accessory uses such as shellfish processing facilities. Jefferson and Thurston counties have done this. WAC 365-190-050
<b>Comprehensive Plan</b>	Critical Areas policies	<p>Policies should include:</p> <p><u>Including Best Available Science:</u> A GMA amendment in 1995 required that jurisdictions include Best Available Science “with special attention to conservation or protection measures necessary to preserve or enhance anadromous fisheries....” RCW 36.70A172(1). See the citations list and other references under the critical areas section of the Comprehensive Plan above.</p> <p><u>Fish and Wildlife Habitat Conservation Areas:</u></p> <ul style="list-style-type: none"> <li>• Designation of nearshore resources including kelp and eelgrass beds, herring, surf smelt, and sand lance spawning areas as critical areas. WAC 365-190-080(5)(a)(iv)</li> <li>• Designation of commercial and recreational shellfish growing areas as critical areas is also recommended. WAC 365-190-080 (5) (a)(iii)</li> <li>• Policies for forage fish protection should include identification and regulation of feeder bluffs that provide sediment that maintains the beach habitat on which these species rely. This may include measures such as setbacks, marine riparian buffers, and restrictions on bulkheads.</li> </ul>

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		<ul style="list-style-type: none"> <li>Adoption of the <i>Stormwater Management Manual for Western Washington</i>, (Ecology, 2001), especially Volume I, the minimum requirements. The minimum requirements include the flow control duration standard and the treatment standard. It is referenced in CTED's <i>Citations of Recommended Sources of Best Available Science for Designating and Protecting Critical Areas</i> (CTED, March 2002) for water quality and habitat.</li> </ul> <p><u>References for data and to identify critical areas:</u></p> <ul style="list-style-type: none"> <li>PSAT packet with multiple links to agency data <a href="http://www.psat.wa.gov/Programs/GMA/GMA.htm">http://www.psat.wa.gov/Programs/GMA/GMA.htm</a></li> <li>Ecology's Digital Coastal Atlas <a href="http://www.ecy.wa.gov/programs/sea/SMA/atlas_home.html">http://www.ecy.wa.gov/programs/sea/SMA/atlas_home.html</a></li> <li>Resources to protect shellfish through critical areas or natural resource lands designations <a href="http://www.psat.wa.gov/Programs/shellfish/Resources_CAO_03.pdf">http://www.psat.wa.gov/Programs/shellfish/Resources_CAO_03.pdf</a></li> <li>CTED's Technical Reports include Best Available Science Citations and a Critical Areas Handbook in pdf files that can be downloaded at <a href="http://cted.wa.gov/DesktopDefault.aspx?tabid=488&amp;tabindex=61">http://cted.wa.gov/DesktopDefault.aspx?tabid=488&amp;tabindex=61</a></li> <li>Forage fish data for north Puget Sound is available from the Northwest Straits Initiative website at <a href="http://www.nwstraits.org/">http://www.nwstraits.org/</a></li> </ul> <p><u>Wetlands and flood hazard areas:</u> Policies to manage stormwater effectively, including encouraging low impact development measures in contributing areas of the watershed to retain or detain runoff at the site as allowed by individual site conditions, in particular the protection of native forested and prairie vegetation and soils. WAC 365-190-080(1) and (3c)</p> <ul style="list-style-type: none"> <li><u>References:</u> Ecology's draft <i>Best Available Science for Freshwater Wetlands</i> is available at <a href="http://www.ecy.wa.gov/programs/sea/bas_wetlands/index.html">http://www.ecy.wa.gov/programs/sea/bas_wetlands/index.html</a></li> </ul>

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		<ul style="list-style-type: none"> <li>For information on Marine and Estuarine wetlands see the Dept of Fish and Wildlife's Aquatic Habitat Guidelines white paper: <a href="http://wdfw.wa.gov/hab/ahg/marnsrc.htm">http://wdfw.wa.gov/hab/ahg/marnsrc.htm</a></li> </ul> <p><u>Geologic hazard areas:</u> Protection of public safety and public and private property from hazards due to steep slopes should include both on-site and off-site drainage and stormwater assessment and management. WAC 365-190-080(4)(d)</p> <p><u>Aquifer recharge areas:</u> Policies to encourage low impact development for stormwater management that promote infiltration of treated stormwater to protect groundwater quality. See WAC 365-190-080 (4c) regarding protection of groundwater quality.</p>
<b>Growth Management Ordinances and Regulations</b>		
<b>Critical Areas Ordinance</b>	Fish and Wildlife Habitat Areas	<ul style="list-style-type: none"> <li>Designate marine riparian areas and nearshore habitats (surf smelt and sand lance spawning areas, eelgrass and kelp beds) as critical fish and wildlife habitat areas. WAC 365-190-080(5)(a)(iv)</li> <li>Designate feeder bluffs not only as geologically hazardous (eroding, slide-prone) bluffs, but also as areas critical for maintaining forage fish spawning habitat where sediment from the feeder bluffs nourishes such habitat.</li> <li>Designate shellfish beds as critical fish and wildlife habitat areas. WAC 365-190-080 (5) (a)(iii)</li> <li>Require consistency of habitat protection plans with recommendations in Washington Department of Fish and Wildlife (WDFW) Aquatic Habitat guidelines for fish and wildlife conservation areas, which can be found at: <a href="http://www.wdfw.wa.gov/hab/ahg/">http://www.wdfw.wa.gov/hab/ahg/</a></li> <li>Stormwater management: <i>Citations of Recommended Sources of Best Available Science</i> (CTED, 2002) includes references in a section "Increased Impervious Surfaces and Stormwater" as well as in the "Water Quality and Habitat" section that are relevant for protection of</li> </ul>

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		<p>aquatic habitat. Included among those references is the revised <i>Stormwater Management Manual for Western Washington</i> (Ecology, 2001). In addition to adopting the 2001 Ecology manual, PSAT recommends that jurisdictions include provisions for areas that drain to critical fish and wildlife habitat that limit and disconnect impervious surfaces, retain native forest cover and encourage or require the use of low impact development stormwater management techniques to treat and infiltrate stormwater on site.</p>
<b>Critical Areas Ordinance</b>	Frequently Flooded Areas	<ul style="list-style-type: none"> <li>• Coordinate mitigation studies with local watershed and salmon recovery planning processes. (PSMP SW 1.2.j)</li> <li>• In areas that drain to flood hazard areas, manage stormwater and encourage low-impact development stormwater measures to prevent runoff contributions from new development and re-development. WAC 365-190-080(3c)</li> </ul>
<b>Critical Areas Ordinance</b>	Wetlands	<ul style="list-style-type: none"> <li>• Ecology’s draft <i>Best Available Science for Freshwater Wetlands</i> is available at <a href="http://www.ecy.wa.gov/programs/sea/bas_wetlands/index.html">http://www.ecy.wa.gov/programs/sea/bas_wetlands/index.html</a></li> <li>• Revise wetland buffers to be consistent with the Department of Ecology publication “Wetland Buffers: Use and Effectiveness” Publication #92-10.</li> <li>• References and information for management of estuarine wetlands is found in the Department of Fish and Wildlife’s Aquatic Habitat Guidelines white paper at <a href="http://wdfw.wa.gov/hab/ahg/marnsrc.htm">http://wdfw.wa.gov/hab/ahg/marnsrc.htm</a></li> <li>• Adopt mitigation policies for wetlands consistent with the state Alternative Mitigation Policy Guidance for Aquatic Permitting, found at: <a href="http://www.wdfw.wa.gov/hab/ahg/altmtgtn.pdf">http://www.wdfw.wa.gov/hab/ahg/altmtgtn.pdf</a></li> </ul> <p>Adopt regulations for wetlands consistent with the guidance in the Marine and Freshwater Habitat program (addendum) of the <i>Puget Sound Water</i></p>

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		<i>Quality Management Plan</i> at: <a href="http://www.psat.wa.gov/Publications/manplan00/08_marinefresh.pdf">http://www.psat.wa.gov/Publications/manplan00/08_marinefresh.pdf</a>
<b>Critical Areas Ordinance</b>	Aquifer Recharge Areas	Include regulations to encourage or require low impact development stormwater measures that treat and infiltrate stormwater on site. See WAC 365-190-080 (4c) regarding protection of groundwater quality.
<b>Critical Areas Ordinance</b>	Geologic Hazard Areas	Provisions for protection of public safety and private and public property from hazards related to steep slopes should include drainage and stormwater management both on-site and off-site, depending on site conditions. WAC 365-190-080(4)(d)
<b>Stormwater Ordinance</b>	Puget Sound stormwater program elements addressed in regulations	Include the following components of the Puget Sound comprehensive stormwater management program in regulations: <ul style="list-style-type: none"> <li>• Stormwater controls for new development and redevelopment</li> <li>• Stormwater site plan review</li> <li>• Maintenance of permanent private facilities and public facilities subject to permit review.</li> <li>• Source control regulations</li> <li>• Provisions for low-impact development</li> <li>• Special regulations for a watershed or sub-basin based on recommendations of watershed or salmon recovery plans, water cleanup plans or shellfish protection plans. (PSMP SW-1.2)</li> </ul>
<b>Stormwater Ordinance</b>	Adoption of Ecology's 2001 <i>Stormwater Management Manual for Western Washington</i>	Adoption of the Ecology manual or a technically equivalent manual is recommended. The regulations for new development and redevelopment, site plan review, maintenance of private and public facilities that are permitted through the stormwater ordinance, as well as some source controls are included in the Ecology manual. Adoption of the manual and its thresholds for review accomplishes those elements. (PSMP SW-1.2.a)

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<b>Stormwater Ordinance</b>	Low impact development	<p>While the Ecology manual currently includes some guidance, best management practices and limited credits for low impact development, an LID credit committee will continue to evaluate research and recommend expanded credits for LID practices. Jurisdictions should develop new or revise existing regulations to allow for, encourage or require these measures. (PSMP SW 1.2.i) Refer to PSAT website for examples of ordinances and regulations:  <a href="http://www.psat.wa.gov/Programs/LID/LID_ordinances.htm">http://www.psat.wa.gov/Programs/LID/LID_ordinances.htm</a>.  Also refer to the City of Seattle's Natural Drainage Systems program:  <a href="http://www.ci.seattle.wa.us/util/NaturalSystems/default.htm">http://www.ci.seattle.wa.us/util/NaturalSystems/default.htm</a>.</p>
<b>Agricultural Lands Ordinances</b>	Shellfish beds as agricultural lands of long-term commercial significance.	<p>Shellfish beds can be designated as agricultural lands of long-term commercial significance under RCW 36.70A.030(2). Recommendations for protection include prohibiting incompatible uses in or adjacent to the growing areas, especially activities that could result in pollution that would threaten water quality and human health. For example, a marina or sewer treatment plant are the most obvious examples, but others would include industrial activities with outfalls or runoff. Allow for accessory uses such as shellfish processing operations. (WAC 365-190-050) PSAT will provide further recommendations later in 2004 after completion of a project to develop land use guidelines for protection of shellfish growing areas.</p>
<b>Zoning Code Regulations</b>	Low impact development	<p>Provisions for review and acceptance of low impact development demonstration projects. (PSMP SW 1.2.j) For sample regulatory language for LID see <a href="http://www.psat.wa.gov/Programs/LID/LID_ordinances.htm">http://www.psat.wa.gov/Programs/LID/LID_ordinances.htm</a>  Provisions for use of LID techniques to treat and infiltrate stormwater close to the source of origin in multiple, small-scale stormwater facilities rather than collecting and conveying it to a centralized treatment facility.  Restrictions on allowable impervious surface area and removal of forest cover. Provisions for disconnecting the impervious surface area. Many jurisdictions limit the percentage of parcel coverage by impervious surface in the development regulations.</p>



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<b>Zoning Code Regulations</b>	LAMIRDS	For counties, higher level stormwater protections and incentives for low impact stormwater measures are recommended in limited areas of more intensive rural development (LAMIRDS) where urban-type levels of impervious surface and land uses occur in greater density than most rural areas. LID can provide cost-effective stormwater management alternatives for new development and redevelopment. (PSMP SW 1.2.i)
<b>Zoning Code Regulations</b>	High priority watersheds for habitat and water quality	Higher levels of stormwater protection and incentives for LID in sensitive, high-priority watersheds. (PSMP SW 1.2.j)
<b>Zoning Code Regulations</b>	Residential subdivisions and multi-family units	Include language to allow clustering to retain natural areas and vegetation/land cover, and use of LID techniques, such as bioretention, soil amendments, permeable pavement, etc. to manage stormwater.
<b>Zoning Code Regulations</b>	Commercial, retail and municipal buildings	Promote incorporation of LID techniques, such as bioretention and amended soils, into parking lot islands. Encourage use of permeable pavement. Encourage rainwater catchment systems and use of the water to irrigate landscaping and flush toilets.
<b>Zoning Code Regulations</b>	Parking requirements	The PSAT LID web page, which has Portland's very innovative parking regulations, provides an excellent example of designs and policies, including incentives. The regulations reduce the number of parking spaces required, the size of parking lot access lanes, and the size of parking spaces in order to reduce overall imperviousness of a site. See <i>Stormwater related amendments to the Zoning Code</i> at <a href="http://www.psat.wa.gov/Programs/LID/LID_ordinances.htm">http://www.psat.wa.gov/Programs/LID/LID_ordinances.htm</a> and other examples of ordinances.
<b>Zoning Code Regulations</b>	Smart Growth in urban growth areas	Promote liveable urban communities using techniques such as allowing mixed land uses, accessory dwelling units, pedestrian-friendly neighborhood design, multi-modal transportation, clustering for preservation of green space, and other measures. Links to more information are on PSAT website at <a href="http://www.psat.wa.gov/Programs/Smartgrowth.htm">http://www.psat.wa.gov/Programs/Smartgrowth.htm</a>

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<b>Health Code (or Sanitary Sewage Code)</b>	Protection of sensitive areas such as shellfish growing areas.	<p>Provide for higher levels of periodic inspection and maintenance of all systems. Refer to PSAT fact sheet <i>Stronger Safeguards for Shellfish Beds</i> section on On-site Sewage Management:</p> <p><a href="http://www.psat.wa.gov/Programs/shellfish/Shell_quality.htm#land">http://www.psat.wa.gov/Programs/shellfish/Shell_quality.htm#land</a></p> <p>Also refer to the <i>Puget Sound Water Quality Management Plan</i> element for On-site Sewage with local program recommendations outlined in OS-2:</p> <p><a href="http://www.psat.wa.gov/Publications/manplan00/mp_index.htm">http://www.psat.wa.gov/Publications/manplan00/mp_index.htm</a></p>